

## CLAIMS

1. A production process for compound semiconductor particles, which comprises the step of heating and/or polish-pulverizing a mixture including a metal carboxylate, an alcohol, and particles or a mixture including a metal-alkoxy-group-containing  
5 compound, a carboxyl-group-containing compound, and particles, thereby covering the particles with a metal oxide, wherein the particles include a compound semiconductor.
2. A production process for compound semiconductor particles according to claim 1, wherein the particles including the compound semiconductor are particles  
10 as obtained by a process including the step of polish-pulverizing coarse particles of the compound semiconductor to thereby fine the particles.
3. A production process for compound semiconductor particles, which comprises the steps of: polish-pulverizing coarse particles of a compound semiconductor to thereby obtain particles having particle diameters of smaller than 1  $\mu\text{m}$ ; and then  
15 covering the resultant particles with a metal oxide.
4. Compound semiconductor particles, which comprise body particles and a metal oxide, wherein the body particles have particle diameters of smaller than 1  $\mu\text{m}$  and are covered with the metal oxide and include a compound semiconductor including an essential element combination of at least one element X selected from  
20 the group consisting of C, Si, Ge, Sn, Pb, N, P, As, S, Sb, Se, and Te and at least one metal element M that is not identical with the element X, and wherein the metal oxide is a metal oxide to which an acyloxyl group is bonded.
5. Compound semiconductor particles according to claim 4, wherein the body particles are particles as obtained by a process including the step of  
25 polish-pulverizing coarse particles of the compound semiconductor including the essential element combination of at least one element X selected from the group consisting of C, Si, Ge, Sn, Pb, N, P, As, Sb, S, Se, and Te and at least one metal element M that is not identical with the element X.